relative importance of subjects, and these I admit are a little in advance of the times. In the five years that I worked there I frequently heard the value of botany insisted upon for training children and I also heard Dr. Martin emphasize the necessity of studying animal and vegetable forms together as in the general biology course."

We have here the pleasing suggestion that botanical work is of value for training children! It would be difficult to ask for a more perfect exhibition of the spirit with which Dr. Campbell came to his task of writing a broad account of biological instruction in Amer ca. I should be far from holding Johns Hopkins responsible for any indiscretion of Dr. Campbell, but under the circumstances it seems a matter of distinct regret that any institution in America should permit a man to graduate from a five years course in biology with the notion that the science of our food-supply, to put it upon a purely economic basis to say nothing of any other, is a fit thing to amuse children with. It is, too, an interesting thing to note in these days of specialization, that it is the zoölogist who wishes to talk of "biology" (which is after all only a synonym of the old phrase, "natural history"); while the botanists, recognising the twin sciences, are willing to give each a place and name. It is possible that the botanists are somewhat in advance of the times, as Dr. Campbell would say.

I have written thus at length because I feel that I am in a position to show the botanists of the country somewhat of the animus that has been displayed in the compilation under government control of what should have been a valuable, accurate, broad-minded, adequate and complete account of the biological work in American colleges. It is unfortunate that it was intrusted to a gentleman who after five years of what he supposes is biological instruction—and I have no reason to think that Dr. Campbell is insincere in supposing that he is a biologist—has the pleasant way of characterising botany as valuable for the training of children.—CONWAY MACMILLAN, *University of Minnesota, Minneapolis.*

NOTES AND NEWS.

MR. W. W. CALKINS has some interesting words regarding the study of lichens in America, in *Science* for August 26.

PROFESSOR GEO. F. ATKINSON has been appointed Assistant Professor of Cryptogamic Botany at Cornell University.

MR. HENRY E. SEATON, Instructor in Botany in Indiana University, has been appointed Assistant Curator at the Harvard Herbarium.

DR. GEORGE VASEY is the accredited representative of the Department of Agriculture and Smithsonian Institution to the International Congress of Botanists at Genoa.

A PRESENTATION of the question of priority in botanical nomenclature from the ethical point of view is given by Prof. L. M. Underwood in *Science* for Aug. 26 (xx, 16).

THE OFFICERS of the new section of botany, G, of the A. A. A. S. for the ensuing year are Dr. Charles E. Bessey of the University of Nebraska, vice-president, and Mr. F. V. Coville, of the U. S. Division of Botany, secretary.

DR. J. C. ARTHUR returned from his European trip early in August, and reports that some botanists, including a few of the most renowned, will probably visit this country next year, but the number is not likely to be large.

PROFESSOR WM. R. DUDLEY, of Cornell University, has been appointed Professor of Systematic Botany at Stanford University. Professor Dudley's work will largely be in the direction of studies in geographical distribution, for which the University is so favorably situated.

FOR THE FIRST TIME in the history of the Botanical Club there was no excursion or reception designed especially for botanists during the recent meeting. The local committee tendered an afternoon excursion to the Club, however, which could not be accepted for lack of time. Upon Saturday each botanist chose the excursion he preferred, there being no pre-arrangement.

DR. B. L. ROBINSON has been appointed Curator of the Harvard Herbarium, and arrangements have been made by which he can have time at his disposal for the completion of the Synoptical Flora. It is the present intention to push this great work as rapidly as possible, an intention which will be warmly commended by American botanists, who were fearful that it might be abandoned altogether.

THE BOTANICAL INSTITUTE at Munich, Germany, is prospering greatly under the management of Prof. Dr. Goebel, who took charge less than a year ago. The building has been renovated, and a considerable addition is now in course of construction, which will contain laboratories for physiological work. The supply of alcoholic and dried material for illustrative purpose has also been much increased, and a series of charts of large size has been specially prepared.

THE CONSPICUOUS ITEMS in the proceedings of the Rochester meeting of the Botanical Club are: (1) the nomenclature agreement; (2) the appointment of Professor Underwood as the Club's representative at Genoa; (3) the action with reference to an International Congress of botanists in connection with the Columbian Exposition; (4) the appointment of a committee to define the terms "range," "locality," "station," and "habitat"; (5) the appointment of a standing committee to prepare a list of plants of the "Manual range" under the adopted rules.

NO SMALL PART of the credit for the large attendance of botanists at the recent gathering in Rochester, and for the unusually full list of papers presented before the Botanical Club, is due to Mr. D. G. Fairchild, the secretary of the Club. By correspondence and solicitation before the meeting he was enabled to present upon the first day of the session a long list of names of those who had signified their intention of being present, and of papers which were to be read. It is

work of this kind which creates and sustains unusual interest in scientific gatherings, and it is a pleasure to note the disinterested and efficient manner in which the present secretary of the Club has performed such self-imposed duties.

THE FOLLOWING PAPERS were read before the Botanical Sub-Section of the British Association for the Advancement of Science, on Friday, August 5th, at the meeting in Edinburgh: "A proposed World's Congress of Botanists at Chicago in 1893," by Dr. J. C. Arthur of La Fayette, Ind., U. S. A.; "Observations on secondary tissues in monocotyledons," by Dr. Scott and Mr. Brebner; "On the simplest form of mosses," by Prof. K. Goebel of Munich, Germany; "On the cause of physiological action at a distance," by Prof. Léo Errera of Brussels, Belgium; "Notes on the morphology of the spore-bearing members in the vascular cryptogams," by Professor Bower; "Notes on an aposporous fern-seedling," by C. T. Druery; "A Chytridian parasitic on Cyclops' eggs," by Prof. M. Hartog; "Arrangement of the buds in Lemna minor," by Miss Nina Layard. Other botanical papers were read on the following Tuesday.

A RECENT ANNOUNCEMENT of the University of Minnesota states that the laboratories of botany occupy a suite of rooms in Pillsbury Hall, viz: (1) herbarium and seminar rooms, (2) a student's morphological and chemical laboratory, (3) an experimental physiology laboratory, (4) a special laboratory, office and reading room, (5) a dark room, (6) a special work room. These with other rooms give a floor space of 6,000 square feet. The laboratory contains microscopes, auxanometers, clinostats after Pfeffer's patterns, thermo-electric apparatus, a Mackintosh lantern, microtomes after Minot and Jung-Thoma, centrifugal wheels, induction coils, heliostat, Lautenschlager's bacterioscopic and sterilizing apparatus, water-motor, balances, thermometers, etc., giving full facilities for elementary, advanced and original work in the field of botany, considered in its widest sense. The herbarium contains over 60,000 specimens. A botanical museum and economic collection has been begun.

IN VIEW of the fact that the nomenclature agreement was the result of a movement inaugurated by the Berlin circular, published in the last number of the GAZETTE, and of the New York and Washington circular, the principles proposed by the latter are here put on record:

I. The adoption of initial dates for generic and specific names.

II. That the publication of a generic name or a binomial specific name invalidates the use of the same name for any subsequently published genus or species.

III. That in the transfer of a species to a genus other than the one under which it was first published, the original specific name is to be preserved, unless such name has previously been employed in the genus to which the species is transferred; and if the author who transfers such species alters the name, it may be restored by any subsequent author.

IV. That a varietal name be treated as equal in rank to a specific name, in its relations as a homonym and in the transfer of species and varieties from one genus to another.